Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. - 53. (Cancelled).

54. (Previously Presented) An MR imaging agent comprising:
a polypeptide comprising a disulfide-linked peptide having the amino acid sequence

Cys-Pro-Tyr-X_{aa}-Leu-Cys (SEQ ID NO: 89), wherein
|_____|

X_{aa} is Asp, Gly or Ala,
wherein said polypeptide is conjugated, optionally through a linker, to a paramagnetic metal MR chelate, and wherein said MR imaging agent is capable of binding fibrin.

55. (Previously Presented) The MR imaging agent according to claim 54, wherein said polypeptide comprises the amino acid sequence
X_1-X_2-Cys-Pro-Tyr-X_6-Leu-Cys-X_9-X_{10}-X_{11} (SEQ ID NO: 135), wherein
|_____|

X_1 is Trp, Phe, His or Tyr;
X_2 is His, Asp or Glu;
X_6 is Asp, Gly or Ala;
X_9 is His, Phe, Tyr or Trp;
X_{10} is Ile, Leu, or Val; and
X_{11} is Asn, Gln, Ile, Leu or Val.

56. (Cancelled).

57. (Previously Presented) The MR imaging agent according to claim 54, said polypeptide comprising an amino acid sequence selected from the group consisting of:

Trp-Phe-His-Cys-Pro-Tyr-Asp-Leu-Cys-His-Ile-Leu (SEQ ID NO: 90);
|_____|

Gln-Trp-Glu-Cys-Pro-Tyr-Gly-Leu-Cys-Trp-Ile-Gln (SEQ ID NO: 91);
|_____|

Gly-Phe-His-Cys-Pro-Tyr-Asp-Leu-Cys-His-Ile-Leu (SEQ ID NO: 92);
|_____|

Phe-His-Cys-Pro-Tyr-Asp-Leu-Cys-His-Ile-Leu (SEQ ID NO: 93);
|_____|

His-Cys-Pro-Tyr-Asp-Leu-Cys-His-Ile-Leu (SEQ ID NO: 94);
|_____|

Phe-His-Cys-Pro-Tyr-Asp-Leu-Cys-His-Ile (SEQ ID NO: 95);
|_____|

Trp-Glu-Cys-Pro-Tyr-Gly-Leu-Cys-Trp-Ile-Gln (SEQ ID NO: 96);
|_____|

Glu-Cys-Pro-Tyr-Gly-Leu-Cys-Trp-Ile-Gln (SEQ ID NO: 97);
|_____|

Trp-Glu-Cys-Pro-Tyr-Gly-Leu-Cys-Trp-Ile (SEQ ID NO: 98);
|_____|

Gly-Phe-His-Cys-Pro-Tyr-Asp-Leu-Cys-His-Ile-Leu (SEQ ID NO: 126);
|_____|

Phe-His-Cys-Pro-Tyr-Asp-Leu-Cys-His-Ile-Leu (SEQ ID NO: 127);
|_____|

His-Cys-Pro-Tyr-Asp-Leu-Cys-His-Ile-Leu (SEQ ID NO: 128);
|_____|

Phe-His-Cys-Pro-Tyr-Asp-Leu-Cys-His-Ile (SEQ ID NO: 129);
|_____|

Trp-Glu-Cys-Pro-Tyr-Gly-Leu-Cys-Trp-Ile-Gln (SEQ ID NO: 130);
|_____|

Glu-Cys-Pro-Tyr-Gly-Leu-Cys-Trp-Ile-Gln (SEQ ID NO: 131); and
|_____|

Trp-Glu-Cys-Pro-Tyr-Gly-Leu-Cys-Trp-Ile (SEQ ID NO: 132).
|_____|

58. (Cancelled).

59. (Previously Presented) An MR imaging agent according to any one of claims ~~49 to 58~~ 54, 55, and 57, wherein said MR imaging agent selectively binds fibrin as compared to fibrinogen.

60. (Previously Presented) An MR imaging agent according to claim 59, wherein said MR imaging agent has a K_d for fibrinogen which is at least 1.5 greater than its K_d for fibrin.

61. (Previously Presented) An MR imaging agent according to claim 60, wherein said MR imaging agent has a K_d for fibrinogen which is at least 10 greater than its K_d for fibrin.

62. (Previously Presented) An MR imaging agent according to claim 61, wherein said MR imaging agent has a K_d for fibrinogen which is at least 100 greater than its K_d for fibrin.

63. (Previously Presented) An MR imaging agent according to claim 62, wherein said MR imaging agent has a K_d for fibrinogen which is at least 1000 greater than its K_d for fibrin.

64. (Cancelled).

65. (Currently Amended) The MR imaging agent according to any of claims ~~49-58~~ 54, 55, and 57, wherein said paramagnetic metal MR chelate is selected from DTPA and derivatives thereof, DOTA and derivatives thereof, EDTA, TETA, EHPG and derivatives thereof, benzo-DTPA and derivatives thereof, HBED and derivatives thereof, benzo-DOTA, dibenzo-DOTA,

NOTA, benzo-NOTA, benzo-TETA, benzo-DOTMA, DOTMA, benzo-TETMA, TETMA, PDTA and derivative thereof, TTHA and derivatives thereof, LICAM and derivatives thereof, and MECAM and derivatives thereof.

66. (Previously Presented) The MR imaging agent according to claim 65, wherein said paramagnetic metal MR chelate is DOTA.

67. (Previously Presented) The MR imaging agent according to claim 65, wherein said paramagnetic metal MR chelate is DTPA.

68. (Currently Amended) The MR imaging agent according to any of claims ~~49-58~~ 54, 55, and 57, wherein said paramagnetic metal has an atomic number of 21-29, 42, 44, or 57-83.

69. (Previously Presented) The MR imaging agent according to claim 68, wherein said paramagnetic metal is selected from the group consisting of Gd(III), Fe(III), Mn(II and III), Cr(III), Cu(II), Dy(III), Tb(III), Ho(III), Er(III), and Eu(III).

70. (Previously Presented) The MR imaging agent according to claim 69, wherein said paramagnetic metal is Gd(III).

71. (Currently Amended) The MR imaging agent according to any one of claims ~~49-58~~ 54, 55, and 57, wherein said polypeptide is conjugated through a linker to said paramagnetic metal MR chelate.

72. (Previously Presented) The MR imaging agent according to claim 71, wherein said linker comprises one or more of the following moieties: amide, urea, acetal, ketal, double ester, carbonyl, carbamate, thiourea, sulfone, thioester, ester, ether, disulfide, lactone, imine, phosphoryl, or phosphodiester moieties; substituted or unsubstituted saturated or unsaturated alkyl chains; linear, branched, or cyclic amino acid chains of a single amino acid or different amino acids; derivatized or underivatized polyethylene glycol, polyoxyethylene, or

polyvinylpyridine moieties; substituted or unsubstituted polyamide moieties; derivatized or underivatized polyamine, polyester, polyethylenimine, polyacrylate, poly(vinyl alcohol), polyglycerol, or oligosaccharide moieties; alternating block copolymers; malonic, succinic, glutaric, adipic and pimelic acid moieties; caproic acid; and diamine and dialcohol moieties.

73. (Previously Presented) The MR imaging agent according to claim 71, wherein said polypeptide is linked through its N- or C-terminus to said paramagnetic metal MR chelate.

74. (Previously Presented) The MR imaging agent according to claim 73, wherein said linkage comprises an amide moiety.